

# New York State Department of Transportation

## Yellow Flag NB2358W018

By: Alex Abreu

Flag Date: June 01, 2023

Superseding Information:

This flag supersedes: YF NB22CTW008

### Structure Information

**BIN: 1065318**

**Feature Carried: 278I278IX2M23027**

**Feature Crossed: 6TH AVENUE**

**Orientation: 8 - NORTHWEST**

**Region: 11 - NEW YORK CITY**

**County: KINGS**

**Political Unit: City of NEW YORK**

**Approximate Year Built: 1962**

**Posted Load Matches Inventory : Yes**

**Bridge Load Posting (Tons) : Not Posted for Load**

**Primary Owner: New York State Department of Transportation**

**Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party**

**Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder**

**This Bridge is not a Ramp**

**Number of Spans: 322**

### Verbal Notification Information

**Person Notified: Muhammad Mubeen**

**Date: June 02, 2023 9:53:00 AM**

**Of: NYSDOT Region 11**

### Signature Information

**Signature: Alex Abreu, P.E. 099761-1**

**Date: June 08, 2023**

**Reviewed By: Robert Kemp**

**Date: June 08, 2023**

**Attachments: 8**

### Flagged Elements

Parent Element	Element	Total Quantity	Unit
<b>Span Number : 165</b>			
	107 - Steel Open Girder/Beam	1041	ft
	PR831 - Steel Beam End	43	each

### Flagged Condition Description

This Yellow Flag NB2358W018 supersedes previously issued Yellow Flag No. NB22CTW008.

Location: Span 165, Girder G19 at Pier 165

**Description:**

The left connection angle at Girder G19 connection to the pier cap at Pier 165 exhibits a 8-1/4"H x 1/8"-3/4"W (previously 9" long but since the girder has been recently cleaned and painted then the limits of the crack were determined) vertical corrosion crack at the upper fillet section (Photo 4). The remaining 20-3/4" area of the fillet section below the corrosion crack at the top of the angle exhibits up to 30% section loss (Photo 5). The bottom of the left connection angle exhibits 2-1/4"L x 1"H corrosion hole (previously 2" long), one 1/4" diameter corrosion hole (new condition), and one 1/2" diameter corrosion hole (new condition) (Photo 6).

The right stiffener connection angle exhibits a 7-1/2"H x 1/4"W (no changes since previous inspection) diagonal corrosion crack stemming from the 4"L x 1"H corrosion hole at the top of the connection angle and continuing into the upper fillet section (Photo 7). The remaining 20-1/2" area of the fillet section below the corrosion crack at the top of the angle to the bottom of the girder exhibits up to 30% section loss (Photo 8). The remaining portion of the stiffener connection angle from the bottom of the girder to the pier bottom flange (approximately 66" high) is in good condition.

The end of Girder G19 at Pier 165 exhibits section loss for the full web height along the connection angles for up to 3" wide with remaining thickness measured ranging from 0.47"-0.51" resulting in average section loss of 40%. The overall shear web area section loss is approximately 39% (Photos 5 and 8).  
(refer to Yellow Flag Condition Sketch Photo #2 for more details)

There are minor changes in the conditions since the previous inspection.

**Notes:**

1. The affected member, Girder G19 is a load path redundant steel girder consisting of a web depth of 34" inches and thickness of 0.80" and is located under the deck in the roadway. All dimensions were measured in the field.
2. The superstructure members within Span 165 have been cleaned and newly painted.
3. The adjacent Girder G18, is 8'-4" on center, exhibits up to 30% section loss for 27" high x 3" wide in the web along the connection angle with 40% localized section loss in the upper web for 8"H x 3"W. Also, the lower web above the bottom flange exhibits 10%-15% section loss. The top of the right connection angle exhibits 1-1/2"L x 1"H corrosion hole.
4. The adjacent Girder G20, is 6'-2" on center, exhibits up to 40% section loss for 20" high x 3" wide in the web along the connection angle. Also, the lower web above the bottom flange exhibits 10%-15% section loss. The left connection angle exhibits two corrosion holes adjacent to the fillet section for 1" diameter at the bottom and 1/2" diameter at the top. The top of the right connection angle exhibits five corrosion holes ranging from pinhole to 1" diameter with 1/8" deep section loss for the full height of the angle.
5. A double right lane closure on 3rd Avenue Eastbound travel direction with 35' bucket truck is required to access the flagged location.

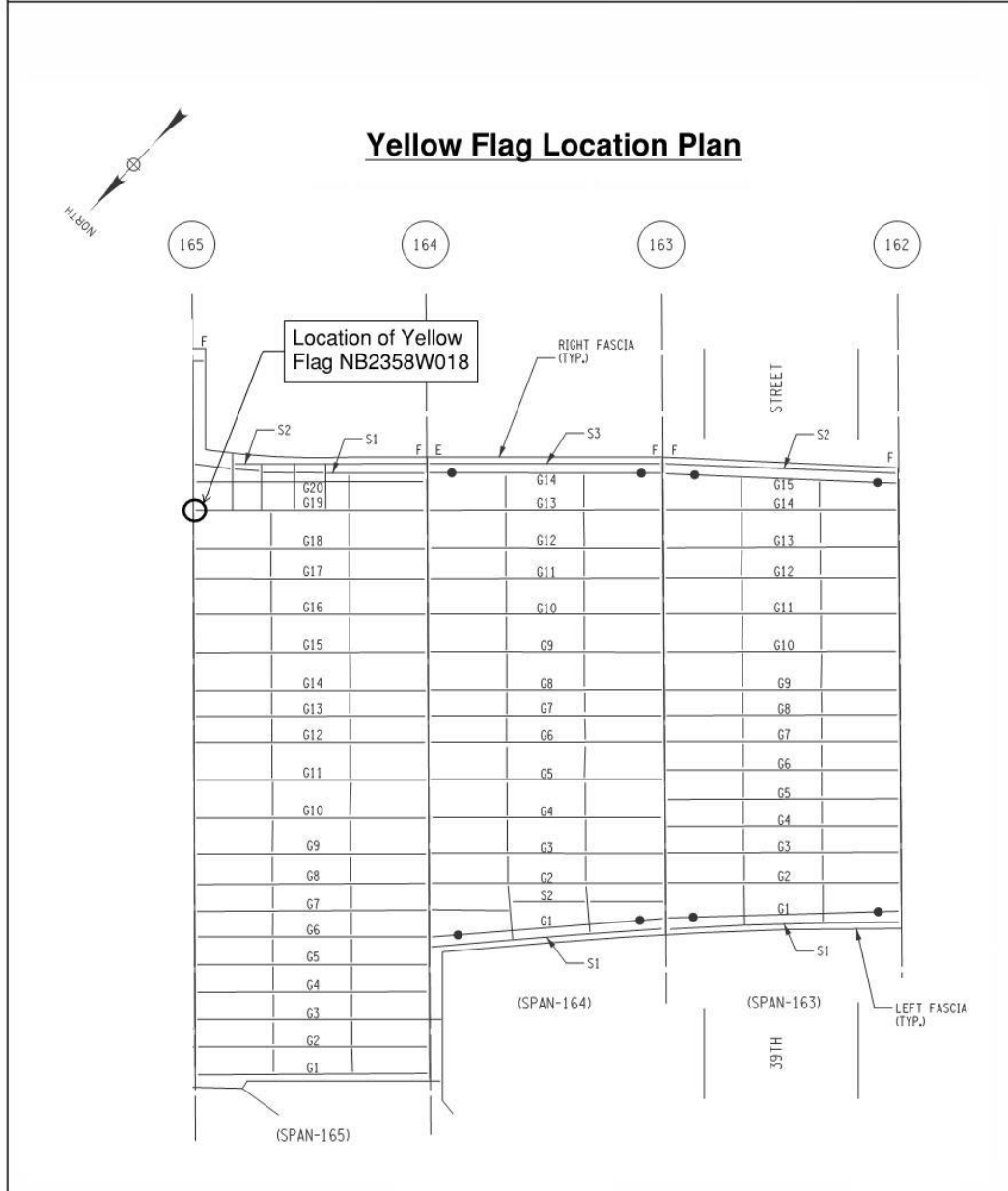
**Flag Photographs**Photo Number: **1**Photo Filename: **23\_Flag Location Plan.jpg**Gowanus Expressway  
2023 Biennial Inspection - Field SketchBIN: 1065318Team: AA/TSDate: 06/01/2023Span: 165Location: Girder G19 at Pier 165**wsp****Attachment Description: Flag Location Plan**

Photo Number: 2

Photo Filename: 23\_Span 165\_Pier 165\_Girder G19\_Connection

Gowanus Expressway  
2022 Biennial Inspection - Field Sketch

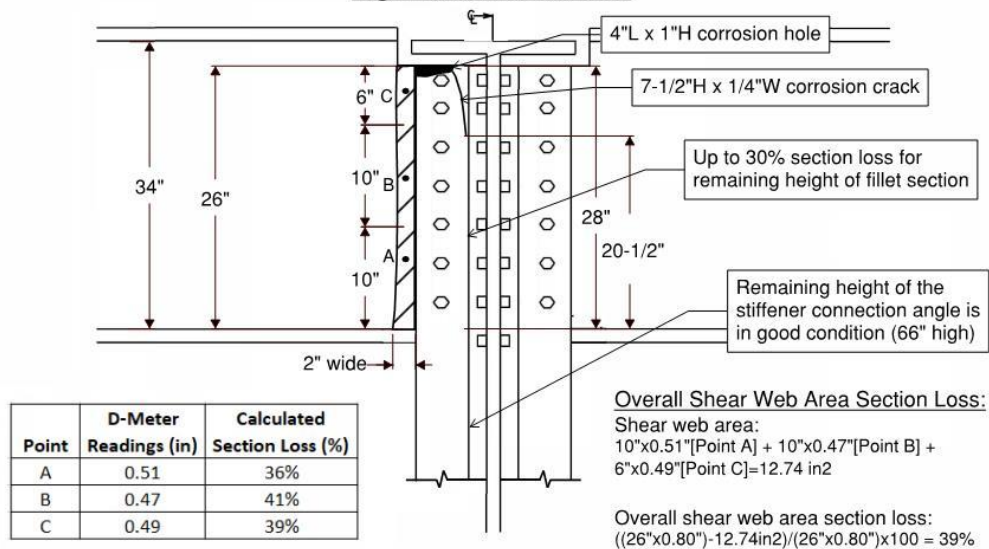
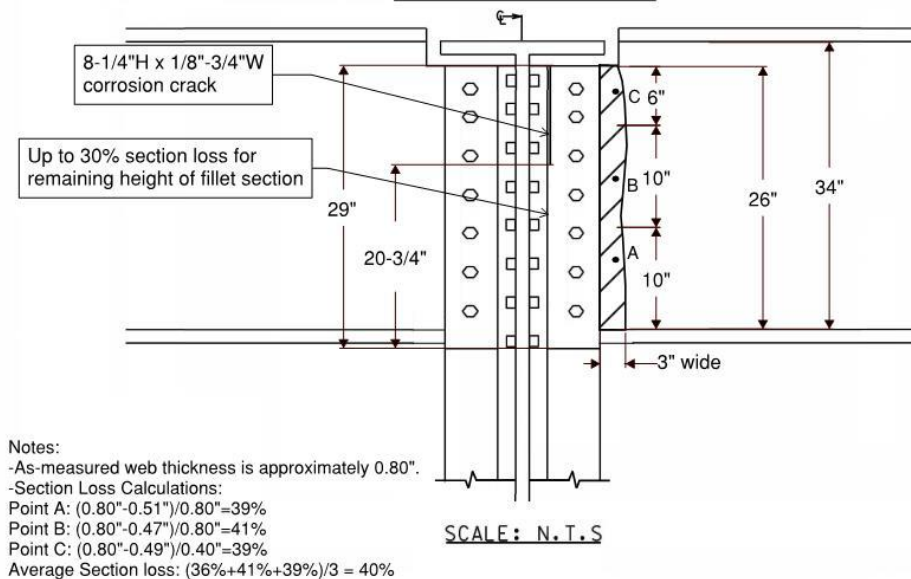
BIN: 1065318

Team: AA/TS

Date: 06/01/2023

Span: 165

Location: Girder G19 at Pier 165

**Right Face of Girder G19****Left Face of Girder G19**

wsp

**Attachment Description: Flag Condition Sketch**

Photo Number: 3

Photo Filename: 23\_113\_7494.JPG



**Attachment Description:** General view of the flagged condition at Girder G19 in Span 165 at Pier 165. Looking End and Left.



Photo Number: 4

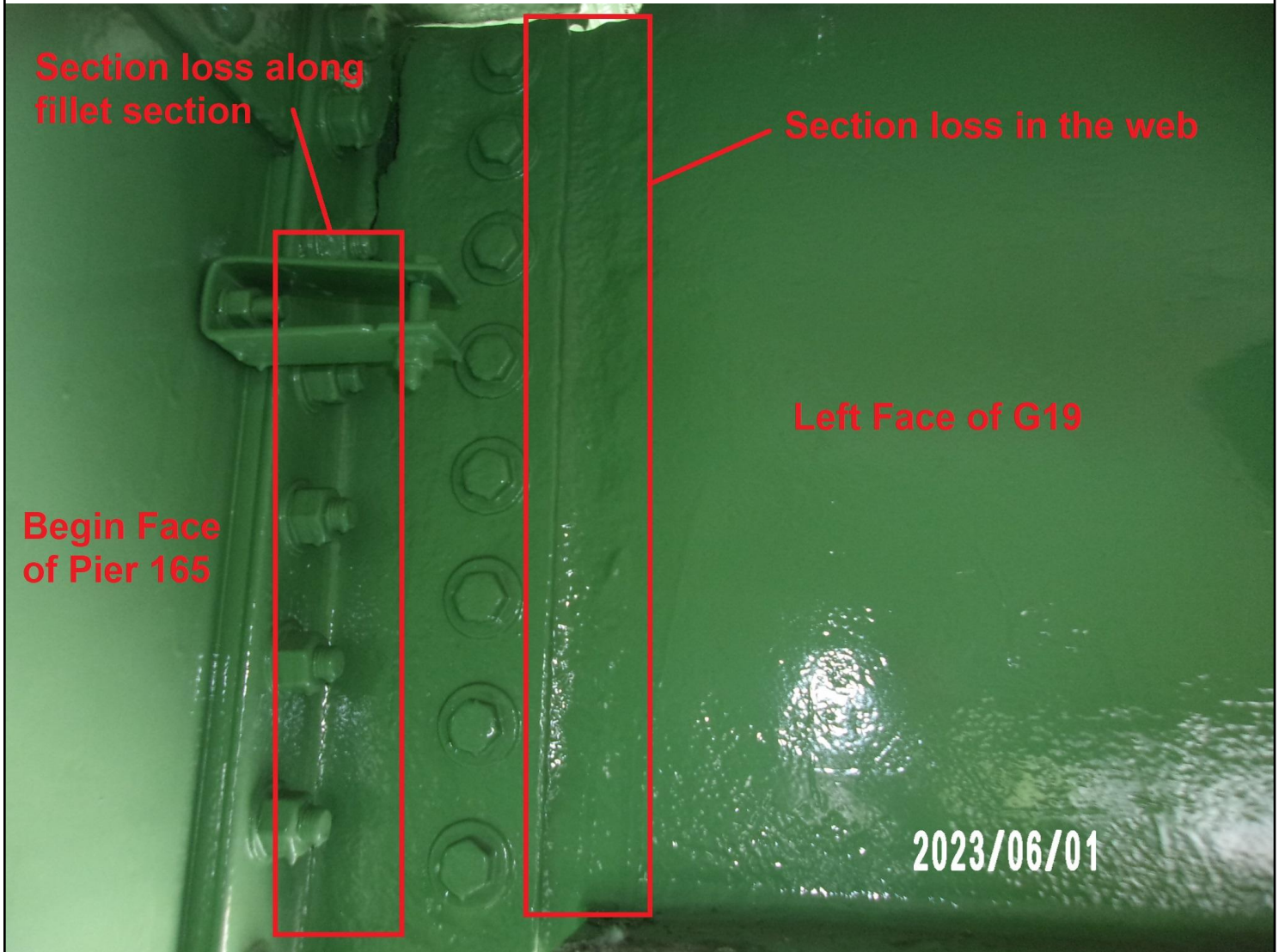
Photo Filename: 23\_113\_7481.JPG



**Attachment Description:** The left face of Girder G19 in Span 165 at Pier 165. The top of the left connection angle exhibits 8-1/4"H x 1/8"-3/4"W corrosion crack at the fillet section. Looking Right.

Photo Number: 5

Photo Filename: 23\_113\_7486.JPG

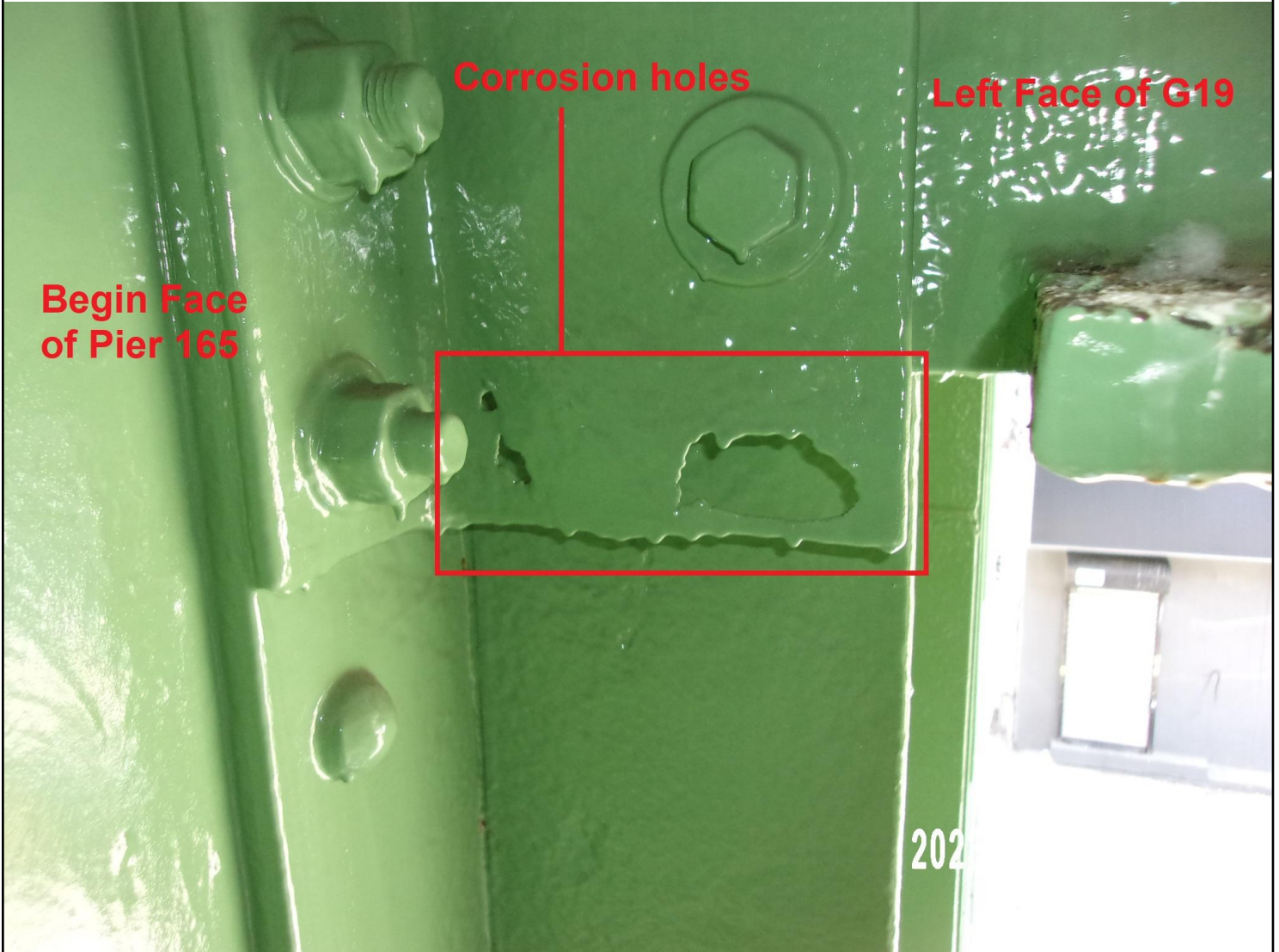


**Attachment Description:** The left face of Girder G19 in Span 165 at Pier 165. The girder web exhibits section loss for the full web height along the connection angle with average section loss of 40% and overall shear web area section loss of 39%. Also, the left connection angle exhibits up to 30% section loss in the fillet section below the crack at the top of the angle. Looking Right.



Photo Number: 6

Photo Filename: 23\_113\_7485.JPG

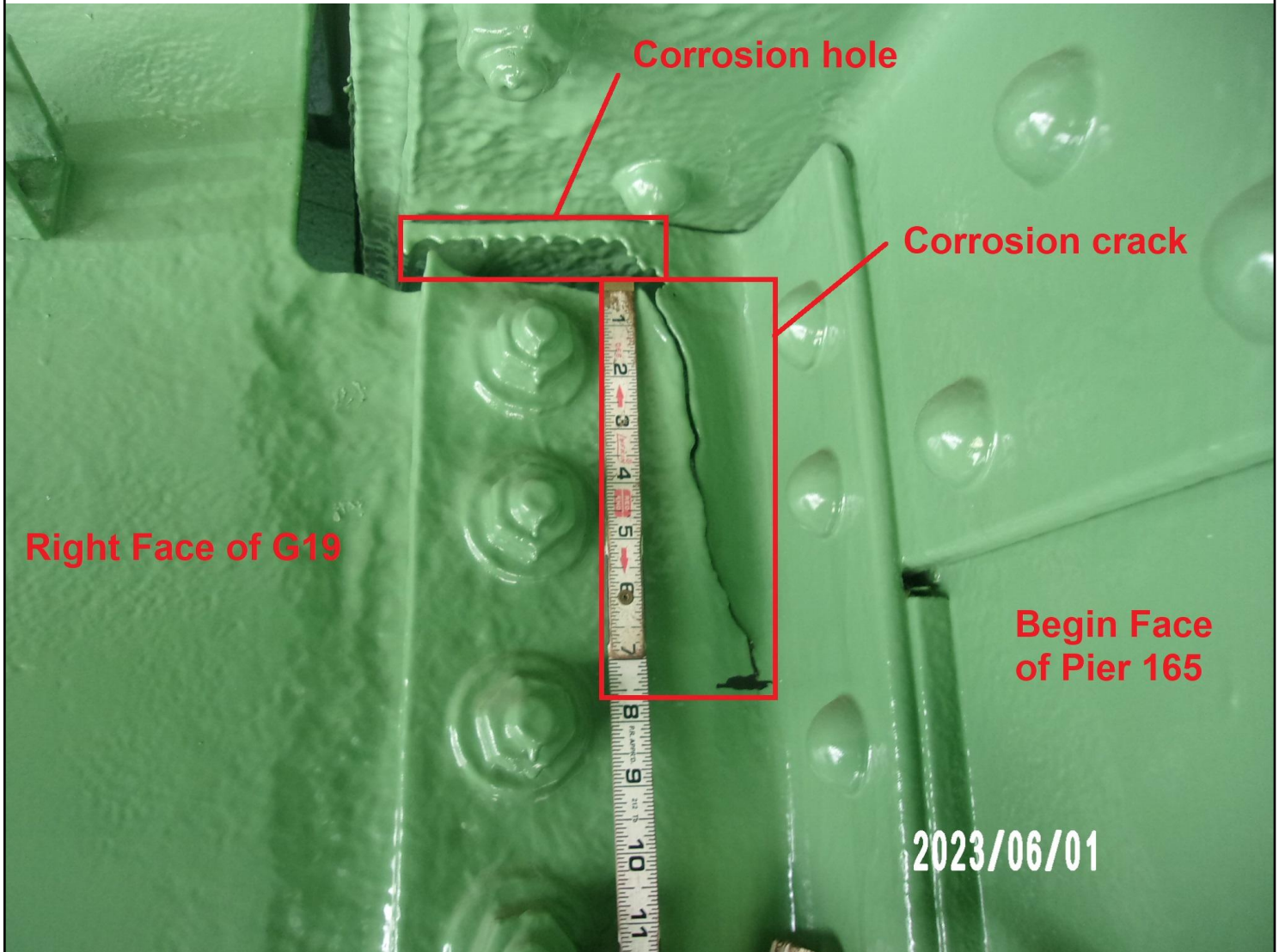


**Attachment Description:** The left face of Girder G19 in Span 165 at Pier 165. The bottom of the left connection angle exhibits three corrosion holes ranging from 1/2" diameter to 2-1/4"L x 1"H. Looking Right.



Photo Number: 7

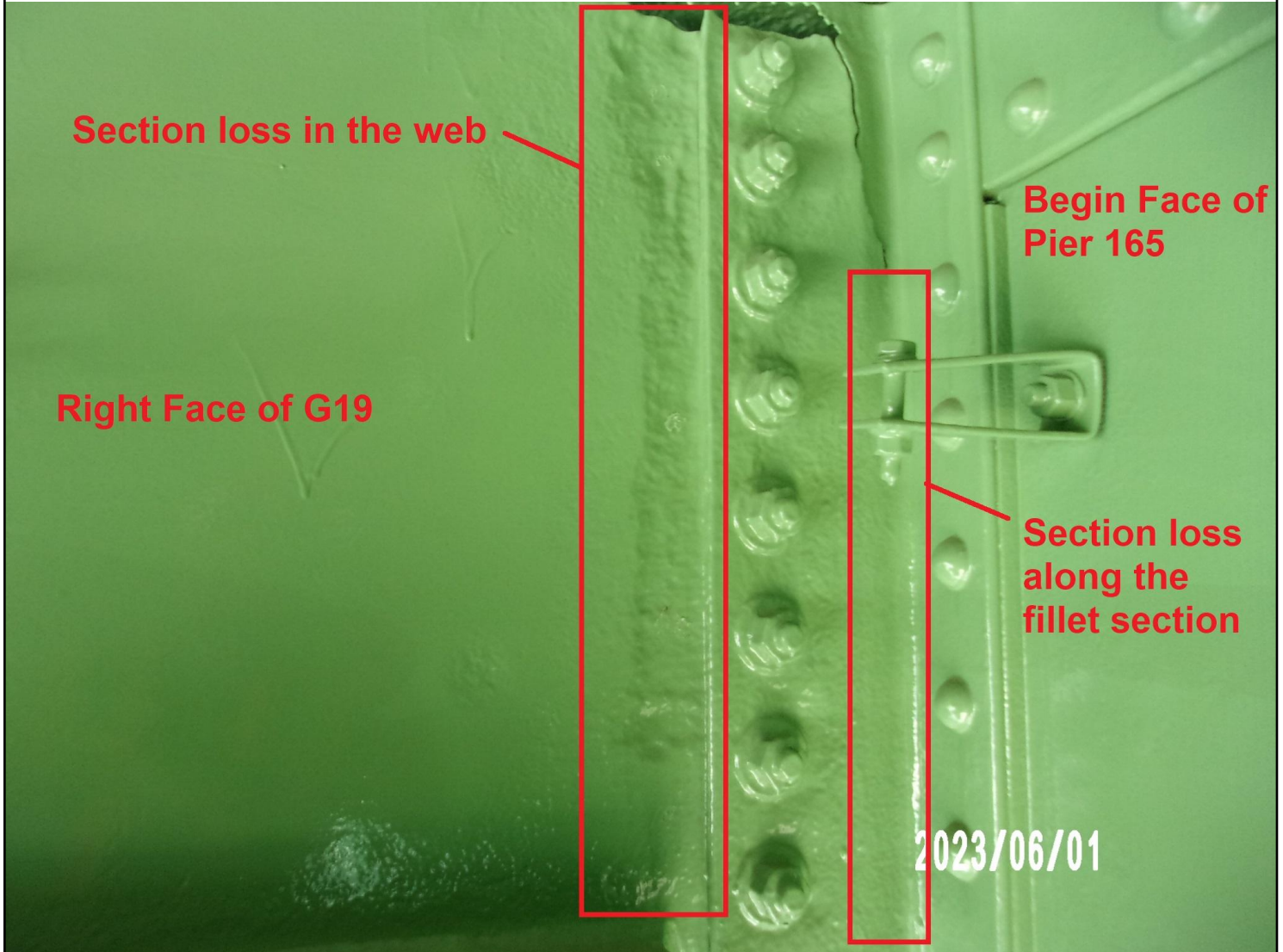
Photo Filename: 23\_113\_7491.JPG



**Attachment Description:** The right face of Girder G19 in Span 165 at Pier 165. The top of the right stiffener connection angle exhibits 7-1/2"H x 1/4"W corrosion crack stemming from the 4"L x 1"H corrosion hole at the top of the angle and continuing into the fillet section. Looking Left.

Photo Number: 8

Photo Filename: 23\_113\_7488.JPG



**Attachment Description:** The right face of Girder G19 in Span 165 at Pier 165. The girder web exhibits section loss for the full web height along the connection angle with average section loss of 40% and overall shear web area section loss of 39%. Also, the right stiffener connection angle exhibits up to 30% section loss in the fillet section below the crack at the top of the angle. Looking Left.